Phenomena of Jupiter's Satellites.

Day of Obs.		Satellite.	Phenomenon.		Telescope.	Power.	Mean Solar Time of Observation.	Mean Solar Time of N.A.	Observer.
							h m s	h m s	
1886, Feb.	22 (*a*)	I.	Ecl. D.	Began to fade	Altaz.	100	10 13 27	10 15 8	L.
	22	I.		Last seen	,,	,,	10 15 8		,,
	23 (*b*)	I.	Tr. Egr.	Last contact	Simms' Eq.	220	10 17 21	10 16	H. T.
Mar.	8	II.	Ecl. D.	Last seen	E. Eq.	70	12 51 6	12 50 30	H.
	9	I.	Tr. Ing.	First contact	,,	210	11 29 18	11 31	L.
	9	I.		Last contact	,,	210	11 32 22		,,
	9 (*c*)	I.	Tr. Egr.	First contact	,,	70	13 41 41	13 45	,,
	9	I.		Last contact	,,	,,	13 45 11		,,
	10	III.	Occ. R.	First seen	Simms' Eq.	80	9 52 22	9 58	H.
	10 (*d*)	III.		Bisection	,,	,,	9 56 37		,,
	10	III.		Last contact	,,	,,	10 2 17		,,
	10	II.	Tr. Egr.	First contact	E. Eq.	210	10 41 30	10 49	T.
	10	II.		Last contact	,,	,,	10 44 45		,,
	10	I.	Occ. R.	First seen	,,	,,	10 56 13	10 59	,,
	10	I.		Last contact	,,	,,	10 58 42		,,
	11	I.	Tr. Egr.	First contact	Simms' Eq.	140	8 8 16	8 11	L.
	11	I.		Last contact	,,	,,	8 12 21		
	11 (*e*)	IV.	Ecl. R.	First seen	,,	220	12 35 35	12 28 45	H. T.
	17	III.	Ecl. D.	Last seen	,,	,,	10 8 31	10 6 43	A. D.
	17 (*f*)	II.	Tr. Ing.	First contact	,,	,,	10 12 31	10 16	,,
	17	II.	Tr. Ing.	Last contact	,,	,,	10 19 16		,,

Day of Obs.		Satellite.	Phenomenon.		Telescope.	Power.	Mean Solar Time of Observation. h m s	Mean Solar Time of N.A. h m s	Observer.
1886, Apr.	1 (*g*)	I.	Tr. Ing.	Last contact	E. Eq.	210	11 10 28	11 9	H.
	3	I.	Tr. Egr.	First contact	Altaz.	100	7 45 34	7 50	T.
	3	I.		Last contact	,,	,,	7 48 48		,,
	8	I.	Tr. Ing.	First contact	,,	,,	12 50 39	12 54	,,
	8	I.		Last contact	,,	,,	12 55 9		,,
	9	I.	Occ. D.	Last seen	,,	,,	10 5 39	10 5	A. P.
	9	I.		Last seen	E. Eq.	210	10 5 14		S. D.
	9	II.		Last seen	Altaz.	100	11 39 54	11 39	A. P.
	9	II.		Last seen	E. Eq.	210	11 39 59		S. D.
	9 (*h*)	I.	Ecl. R.	First seen	Lassell Refl.	350	12 44 33	12 44 46	H. T.
	9	I.		First seen	Altaz.	100	12 44 43		S. D.
	11	II.	Tr. Egr.	First contact	E. Eq.	210	8 44 5		A. D.
	11	II.		Bisection	,,	,,	8 46 10	8 48	,,
	11	II.		Last contact	,,	,,	8 49 34		,,
	22	III.	Ecl. R.	First seen	,,	70	8 46 28	8 43 44	J. P.
	25 (*i*)	I.		First seen	Simms' Eq.	220	11 2 5	11 1 34	H. T.
	27	II.		First seen	E. Eq.	210	9 51 57	9 52	H.
	29	III.	Occ. R.	Bisection	Altaz.	100	9 23 53	9 23	R. W.
	29	III.		Last contact	,,	,,	9 26 13		,,
	29 (*j*)	III.	Ecl. D.	Began to fade	E. Eq.	210	9 57 24	9 59	A. D.
	29	III.		Last seen	,,	,,	10 3 7		,,
	29 (*k*)	III.	Ecl. R.	First seen	Simms' Eq.	220	12 41 32	12 41 19	H. T.

Day of Obs.	Satellite.	Phenomenon.		Telescope.	Power.	Mean Solar Time of Observation. h m s	Mean Solar Time of N.A. h m s	Observer.
1886, Apr. 30	IV.	Occ. D.	Bisection	Simms' Eq.	220	8 27 1	8 33	H.T.
30 (*l*)	IV.		Last seen	,,	,,	8 33 31		,,
30	IV.	Occ. R.	First seen	,,	,,	9 55 31		,,
30	IV.		Bisection	,,	,,	10 0 38		,,
30 (*m*)	IV.		Last contact	,,	,,	10 11 31	10 1	L.
30	IV.		First seen	E. Eq.	210	9 59 47		,,
30	IV.		Last contact	,,	,,	10 9 26		,,
May 2 (*n*)	I.	Ecl. R.	First seen	Lassell Refl.	350	12 56 0	12 55 53	H. T.
2	II.	Tr. Ing.	First contact	,,	,,	12 56 45		,,
2 (*n*)	II.		Bisection	,,	,,	13 0 45	12 55	,,
2	II.		Last contact	,,	,,	13 4 15		,,
3	I.	Tr. Egr.	First contact	Simms' Eq.	220	9 18 38		T.
3	I.		Bisection	,,	,,	9 20 22	9 22	,,
3	I.		Last contact	,,	,,	9 22 22		,,
4	II.	Ecl. R.	First seen	E. Eq.	210	12 28 43	12 28 48	L.
4	II.		Full brightness	,,	,,	12 30 28		,,
6	III.	Occ. D.	First contact	,,	,,	9 54 55		,,
6	III.		Last seen	,,	,,	10 3 33		,,
6	III.		First contact	Altaz.	100	9 54 7	9 57	R. W.
6	III.		Bisection	,	,,	9 57 17		,,
6	III.		Last seen	,,	,,	10 0 47		,,

Day of Obs.	Satellite.	Phenomenon.		Telescope.	Power.	Mean Solar Time of Observation. h m s	Mean Solar Time of N.A. h m s	Observer.
1886, May 6	III.	Occ. R.	First seen	E. Eq.	210	12 49 54	12 55	R. W.
6	III.		Last contact	,,	,,	12 56 55		,,
6	III.	Ecl. D.	Last seen	,,	,,	13 58 17	13 57 55	,,
18	I.	Ecl. R.	First seen	,,	,,	11 13 29	11 13 30	H.
18	I.		Full brightness	,,	,,	11 14 53		,,
20	II.	Tr. Egr.	First contact	Simms' Eq.	220	9 41 9	9 42	L.
20	II.		Last contact	,,	,,	9 47 9		,,
27	II.	Tr. Ing.	First contact	E. Eq.	210	9 23 58	9 21	T.
27 (*o*)	II.		Bisection	,,	,,	9 26 43		,,
29	II.	Ecl. R.	First seen	,,	140	9 36 29	9 36 53	A. D.
29	II.		Full brightness	,,	,,	9 41 2		,,
July 6	III.	Tr. Egr.	Bisection	,,	210	9 39 31	9 40	,,
6	III.		Last contact	,,	,,	9 42 25		,,

Notes.

(*a*) Observations considered good.
(*b*) Limb of planet somewhat tremulous, but satellite well defined.
(*c*) Satellite much brighter than *Jupiter*.
(*d*) The time recorded for bisection is probably too early.
(*e*) No trace of the satellite was visible at $12^h\ 33^m\ 30^s$, when *Jupiter* was lost in cloud; on reappearing at the time recorded the satellite was seen with some distinctness. Thick cloud then came up.
(*f*) Time recorded very uncertain, as the sky was thick and the satellites were faint.
(*g*) Planet was obscured at times by cloud.
(*h*) Definition very bad.
(*i*) Observed through a temporary break in the clouds, but considered a real observation of reappearance.
(*j*) Observation uncertain from cloud.
(*k*) Observed through cloud, but the planet was shining brilliantly when the satellite was first seen.
(*l*) Until $8^h\ 35^m$ there appeared to be a slight abruptness on *Jupiter's* limb at the point of disappearance, but the observer was inclined to consider this the effect of strain on the eye.
(*m*) Satellite well clear at $10^h\ 14^m\ 30^s$.
(*n*) Definition very bad owing to haze.
(*o*) *Jupiter* diffused.

Occultation of γ Virginis, 1886. By F. C. Penrose.

A few remarks on an observation of an occultation of *γ Virginis* on the 18th inst. may be interesting to the Royal Astronomical Society.

The morning was fine, but there were some slight clouds, and one was over the Moon near the time predicted for the reappearance, so that I could not see the grey Moon, and, as I was dependent on the position-angle at the vertex, could not use a power high enough to separate the star properly, but I think the observation was more interesting and beautiful in consequence.

At G.M.T., ± say 2^s, $16^h\ 33^m\ 32^s$, a bright flash showed the reappearance of γ_1, and exactly 10 seconds later was another flash, which seemed to double the brightness of the star.

The time was corrected by altitudes of east and west stars observed at nearly the same altitude and azimuth with a theodolite.

I got several positions of Barnard's Comet, particularly Nov. 29, Dec. 4, and Dec. 9, but they are probably liable to errors of two or three minutes of arc.

Approximate place of station, longitude $1^h\ 34^m\ 58^s$ E., and latitude 37° 58′ 15″ N.

Athens: 1886, *Dec.* 26.

Occultation of Aldebaran, Jan. 6, 1887. By the Rev. S. J. Johnson, M.A.

The occultation of *Aldebaran* on the 6th was observed here very favourably. Disappearance at $12^h\ 12^m\ 49^s$ was instantaneous; not the slightest lingering or projection on the limb, though a portion of the Moon's dark limb was left, and the sky around was perfectly clear. The star seemed to lose its redness as the Moon approached it; the emersion at $13^h\ 14^m\ 5^s$ not nearly so sudden. Star seemed to creep out leisurely from a point just north of the Mare Crisium, but some haze was present. Power 50 employed, on $3\frac{1}{4}$-inch. Time by sextant.

Melplash Vicarage, Dorset:
1887, *Jan.* 10.
